



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**D2521**  
**Job Sheet 178963**



Part No: D2521

Job Qty: 8 ea

Part Name: Individual Bearpaw



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/11/18

Job Tracking No:

Due Date: 6/29/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV J IPP Rev:A 08-10-01 New Manufacturing Method JLM Verified By:EC

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation              | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off      |
|-------|------------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|---------------|
|       |                        |       |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |               |
| 90    | Start up Operation     | 8 Ea  |            | 6/29/18  | 0.00      | 0.00    | Start Up Container    |           | 18/06/21      |
| 120   | Waterjet               | 8 pcs |            | 6/29/18  | 0.00      | 3.01    | Waterjet 2 OMAX       |           | 18/06/21      |
| 130   | CNC Vertical Machining | 8 pcs |            | 6/29/18  | 0.39      | 13.89   | HAAS 1                |           | 52 18/06/21   |
| 140   | QC                     | 8 pcs |            | 6/29/18  | 0.00      | 0.00    | QC2                   |           | 9-89 18/06/21 |
| 150   | QC                     | 8 pcs |            | 6/29/18  | 0.00      | 0.00    | QC8                   |           | 9-89 18/06/21 |
| 160   | Packaging              | 8 pcs |            | 6/29/18  | 0.00      | 0.00    | Packaging3            |           | SEP 11 2018   |
| 170   | QC21-SA                | 8 Ea  |            | 6/29/18  | 0.00      | 0.00    | QC21                  |           | SEP 11 2018   |

Part Op 120 - Cut Blank as per D2521 blank file

Descriptions: 130 - 1-Inspect material for defects or damage prior to machining 2-Machine as per Folio and Dwg D2521 Identify as D2521

### Job BOM

| Part / Item | Component Name                               | Quantity     | Operation             | Container |
|-------------|----------------------------------------------|--------------|-----------------------|-----------|
| MUHMWB10    | UHMW 1" Black - 48"x120" Tivar Mfg.#52480104 | 56 sf (7 ea) | 90-Start up Operation | 30 X55    |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | MUHMWB10       | 56       | 1,431     | 0         |

### Part Specifications

Specifications could not be found.

Plex 6/11/18 11:48 AM Dart.lajeunesse.marie

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

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| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td style="width:15%;">Skid-tube <input type="checkbox"/></td> <td style="width:15%;">Cross tube <input type="checkbox"/></td> <td style="width:15%;">Water Jet <input type="checkbox"/></td> <td style="width:15%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                                            |                                                |                   | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/>   | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/>              | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>                  | Large Fab <input type="checkbox"/>                         | Composite <input type="checkbox"/>          | Supplier <input type="checkbox"/> |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                                     |                                   |                                          |                                             |                                                          |                                       |                                             |                                           |                                        |                                      |                                                |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |               |  |  |
| Skid-tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| Machining <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. 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Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Quality <input type="checkbox"/>                           |                                                |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                                     |                                   |                                          |                                             |                                                          |                                       |                                             |                                           |                                        |                                      |                                                |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |               |  |  |
| Thermoforming <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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| Large Fab <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                    | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">MRB (QSI042) Approval</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Completed By</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Lead hand / Supervisor Approval Verification</div> <div style="border: 1px solid black; padding: 5px;">QC / QA Coordinator Approval</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                            |                                                |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                                     |                                   |                                          |                                             |                                                          |                                       |                                             |                                           |                                        |                                      |                                                |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |               |  |  |
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| <div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Dart Aerospace Ltd.<br/>1270 Aberdeen Street<br/>Newbury, ON K6A 1K7<br/>CANADA<br/>TEL: 1 813 832-5200<br/>Email: sales@dartaero.com<br/>www.dartaero.com</p> <p style="font-size: small; margin: 0;">Date: 06/21/16</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| <div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Container No: S082941</p> <p style="font-size: small; margin: 0;">Part: D2521</p> <p style="font-size: small; margin: 0;">Job No: 178963</p> <p style="font-size: small; margin: 0;">Serial No/Batch: S082941</p> <p style="font-size: small; margin: 0;">Revision: _____</p> <p style="font-size: small; margin: 0;">Inspector: _____</p> <p style="font-size: small; margin: 0;">Exp Date: _____</p> <p style="font-size: small; margin: 0;">Instructions: _____</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                             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| <table style="width:100%;"> <tr> <td style="width:20%;"><b>Root Cause</b></td> <td style="width:20%;"></td> <td style="width:20%;"></td> <td style="width:20%;"></td> <td style="width:20%;"></td> </tr> <tr> <td>Environment <input type="checkbox"/></td> <td>No Re-ve <input type="checkbox"/></td> <td>Cracks <input type="checkbox"/></td> <td>Broken/Damage/Defect <input type="checkbox"/></td> <td>Weld <input type="checkbox"/></td> </tr> <tr> <td>Design <input type="checkbox"/></td> <td>Operator <input type="checkbox"/></td> <td>Crimp/Kink/Ripple/Wave <input type="checkbox"/></td> <td>Inspection Incomplete/Unqualified <input type="checkbox"/></td> <td>Wrong Stock Pulled <input type="checkbox"/></td> </tr> <tr> <td>Doc/Data <input type="checkbox"/></td> <td>Offset/Se <input type="checkbox"/></td> <td>Cuffs <input type="checkbox"/></td> <td>Contamination <input type="checkbox"/></td> <td>Out of Sequence <input type="checkbox"/></td> </tr> <tr> <td>Equip/Tooling <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td>Crushing <input type="checkbox"/></td> <td>Countersink <input type="checkbox"/></td> <td>Off-set <input type="checkbox"/></td> </tr> <tr> <td>Handling/Pre <input type="checkbox"/></td> <td>Training <input type="checkbox"/></td> <td>Heat Treat <input type="checkbox"/></td> <td>Cut Too Short <input type="checkbox"/></td> <td>Mislabeled <input type="checkbox"/></td> </tr> <tr> <td>Material <input type="checkbox"/></td> <td>Use for Testing <input type="checkbox"/></td> <td>Wave/Twist in Tube <input type="checkbox"/></td> <td>Instructions Incomplete/Unclear <input type="checkbox"/></td> <td>Fit/Function <input type="checkbox"/></td> </tr> <tr> <td>Internal Transport <input type="checkbox"/></td> <td>Poor Information <input type="checkbox"/></td> <td>Marks/Chatter <input type="checkbox"/></td> <td>Drill Holes <input type="checkbox"/></td> <td>Misaligned/off center <input type="checkbox"/></td> </tr> <tr> <td>Tribal Knowledge <input type="checkbox"/></td> <td>Rushing <input type="checkbox"/></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LOA <input type="checkbox"/></td> <td>Product Improvement <input type="checkbox"/></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Substation <input type="checkbox"/></td> <td>Process Improvement <input type="checkbox"/></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Past Expiry Date <input type="checkbox"/></td> <td>Manufacturing Process <input type="checkbox"/></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Misidentified <input type="checkbox"/></td> <td>Past Due <input type="checkbox"/></td> <td colspan="3">OTHER : _____</td> </tr> </table> |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                            |                                                | <b>Root Cause</b> |                                    |                                     |                                    |                                      | Environment <input type="checkbox"/> | No Re-ve <input type="checkbox"/>  | Cracks <input type="checkbox"/>            | Broken/Damage/Defect <input type="checkbox"/> | Weld <input type="checkbox"/>          | Design <input type="checkbox"/>    | Operator <input type="checkbox"/>            | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Doc/Data <input type="checkbox"/> | Offset/Se <input type="checkbox"/> | Cuffs <input type="checkbox"/> | Contamination <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/> | Crushing <input type="checkbox"/> | Countersink <input type="checkbox"/> | Off-set <input type="checkbox"/> | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Material <input type="checkbox"/> | Use for Testing <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | Rushing <input type="checkbox"/> |  |  |  | LOA <input type="checkbox"/> | Product Improvement <input type="checkbox"/> |  |  |  | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> |  |  |  | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> |  |  |  | Misidentified <input type="checkbox"/> | Past Due <input type="checkbox"/> | OTHER : _____ |  |  |
| <b>Root Cause</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Environment <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| Design <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>    |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                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| Doc/Data <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Offset/Se <input type="checkbox"/>                                                                                                                                                 | Cuffs <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>       |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                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| Equip/Tooling <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Supplier <input type="checkbox"/>                                                                                                                                                  | Crushing <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>               |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                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| Handling/Pre <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Training <input type="checkbox"/>                                                                                                                                                  | Heat Treat <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>            |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                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| Material <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Use for Testing <input type="checkbox"/>                                                                                                                                           | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>          |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                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| Internal Transport <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Poor Information <input type="checkbox"/>                                                                                                                                          | Marks/Chatter <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/> |                   |                                    |                                     |                                    |                                      |                                      |                                    |                                            |                                               |                                        |                                    |                                              |                                                 |                                                            |                                             |                                   |                                    |                                |                                        |                                          |                                        |                                   |                                   |                                      |                                  |                                       |                                   |                                     |                                        |                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| Tribal Knowledge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| LOA <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| Substation <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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| Past Expiry Date <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Manufacturing Process <input type="checkbox"/>                                                                                                                                     |                                                                                                                                                                      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| Misidentified <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Past Due <input type="checkbox"/>                                                                                                                                                  | OTHER : _____                                                                                                                                                        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|                                            |  |                           |
|--------------------------------------------|--|---------------------------|
| <b>DART AEROSPACE LTD</b>                  |  | <b>Work Order:</b> 178963 |
| <b>Description:</b> Bearpaw                |  | <b>Part Number:</b> D2521 |
| <b>Inspection Dwg:</b> D2521 <b>Rev:</b> J |  | <b>Page 1 of 1</b>        |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article      ☐ Prototype

| Inspection Sheet Drawing Dimension |        |        | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|------------------------------------|--------|--------|------------------|--------|--------|----------------------|----------|
| Dim                                | Min    | Max    |                  |        |        |                      |          |
| A                                  | 0.260  | 0.266  | .260             | ✓      |        | G.P.                 |          |
| B                                  | 0.90   | 0.96   | .931             | ✓      |        | Uer                  |          |
| C                                  | 0.27   | 0.330  | .310             | ✓      |        | D.G.                 |          |
| D                                  | 0.470  | 0.530  | .500             | ✓      |        | Uer                  |          |
| E                                  | 21.740 | 21.760 | 21.750           | ✓      |        | TAPE                 |          |
| F                                  | 0.72   | 0.780  | .780             | ✓      |        | Uer                  |          |
| G                                  | 0.35   | 0.410  | .380             | ✓      |        | Uer                  |          |
| H                                  | 11.490 | 11.570 | 11.500           | ✓      |        | TAPE                 |          |
| I                                  | 3.41   | 3.47   | 3.44             | ✓      |        | Uer                  |          |
| J                                  | 11.790 | 11.810 | 11.800           | ✓      |        | TAPE                 |          |
| K                                  | 9.47   | 9.53   | 9.500            | ✓      |        | TAPE                 |          |
| L                                  | 7.190  | 7.210  | 7.200            | ✓      |        | Uer                  |          |
| M                                  | 6.910  | 6.970  | 6.94             | ✓      |        | Uer                  |          |
| N                                  | 44.47  | 44.530 | 44.50            | ✓      |        | TAPE                 |          |
| O                                  | 6.590  | 6.650  | 6.620            | ✓      |        | Uer                  |          |
| P                                  | 0.940  | 0.980  | .963             | ✓      |        | Uer                  |          |
| Q                                  | 18.97  | 19.03  | 19.000           | ✓      |        | TAPE                 |          |
| R                                  | 0.350  | 0.410  | .380             | ✓      |        | Uer                  |          |
| S                                  | 0.740  | 0.780  | .760             | ✓      |        | Uer                  |          |
| T                                  | 0.240  | 0.280  | .260             | ✓      |        | Uer                  |          |
| U                                  | 0.370  | 0.410  | .390             | ✓      |        | Uer                  |          |
| V                                  | 0.740  | 0.780  | .743             | ✓      |        | Uer                  |          |
| W                                  | 0.740  | 0.780  | .760             | ✓      |        | Uer                  |          |
|                                    |        |        |                  |        |        |                      |          |
|                                    |        |        |                  |        |        |                      |          |
|                                    |        |        |                  |        |        |                      |          |
|                                    |        |        |                  |        |        |                      |          |

|                                    |                                |                            |     |
|------------------------------------|--------------------------------|----------------------------|-----|
| <b>Measured by:</b> BAS 52<br>9-89 | <b>Audited by:</b> [Signature] | <b>Prototype Approval:</b> | N/A |
| <b>Date:</b> 18/08/24              | <b>Date:</b> 18/08/25          | <b>Date:</b>               | N/A |

| Rev | Date     | Change                                    | Revised by         | Approved    |
|-----|----------|-------------------------------------------|--------------------|-------------|
| A   | 03.09.22 | New Issue P/O D205-564-011 & D430-688-011 | KJ/RF              |             |
| B   | 05.06.15 | Dimensions and tolerances changed         | KJ/RF              |             |
| C   | 06.08.31 | Dimensions updated per D2521 Rev. J       | KJ/JLM [Signature] | [Signature] |

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  |                                              |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|--|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                               |  |  |                                              |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  | MRB (QSI042) Approval                        |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |  |  | Completed By                                 |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  | Lead hand / Supervisor Approval Verification |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  |                                              |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  |                                              |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  |                                              |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Positioned Wrong <input type="checkbox"/>     |  |  |                                              |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Outside Dimensions <input type="checkbox"/>   |  |  |                                              |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Over/Under tolerance <input type="checkbox"/> |  |  |                                              |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Part Incorrect <input type="checkbox"/>       |  |  |                                              |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Lost/Missing <input type="checkbox"/>    |  |  |                                              |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Part Moved <input type="checkbox"/>           |  |  |                                              |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Drawing <input type="checkbox"/>              |  |  |                                              |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Finish <input type="checkbox"/>               |  |  |                                              |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Misread <input type="checkbox"/>              |  |  |                                              |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Turning Sequence <input type="checkbox"/>     |  |  |                                              |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> | OTHER :                                                                                                                                                                            |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  |                                              |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |  |                                              |  |